Radish *(Raphanus sativus L.)*

French: Radis; Spanish: Rábano; Italian: Ravano; German: Rettich

Under Tropical/Subtropical Conditions

Crop data

Annual. Harvested part: root. Directly seeded. Harvested: 22 - 30 days after planting. Plant density: 363 000 to 522 000 plants (average) to 1 250 000 (very intensive) plants/ha.

Preferably grown in a rich fertile soil free of stones and clods, to allow for rapid growth and smooth root growth. Sandy soils are preferred for early yields, pH 5.5 - 6.8. The crop is adapted to cool growing conditions.

Target marketable yields in intensive commercial production: 11 - 25 t/ha.

Nutrient demand/uptake/removal

Nutrient uptake/removal - Macronutrients					
Yield t/ha	**kg/ha**				
	N	**P2O5**	**K2O**	**MgO**	**CaO**
19	276	89	389	76	147
Source: various					

Plant analysis data

Plant analysis data - Macronutrients							
Plant part	**Growth stage**	**% of dry matter**					
		N	**P**	**K**	**Mg**	**Ca**	**S**
Young mature leaf	20-30 days after planting	3.0	0.9	2.4	0.24	1.1	0.9
Source: various							

Plant analysis data - Micronutrients						
Plant part	**Growth stage**	**ppm dry matter**				
		Fe	**Mn**	**Zn**	**Cu**	**B**
Young mature leaf	20-30 days after planting	34	16	23	2	6
Source: various						

Fertilizer recommendations

Critical tissue P concentration in organic soils in Florida is 0.45 %. In B deficient soils 10 kg/ha of borax will increase ascorbic acid content and yields. B toxicity (B > 0.1 mg/l) should be avoided.

Present fertilizer practices

USA (Florida)

On irrigated mineral soils apply 100 kg/ha N, 134 kg/ha P2O5 and 134 kg/ha K2O. P and K should only be applied after soil analysis indicates deficiency. Broadcast all the P2O5 and

half the N and K2O at planting. Apply the remainder of the total N and K2O, 15 days after planting. These rates should support three radish crops grown in succession.

Philippines (Los Banos)

Broadcast 60 kg/ha N, 90 kg/ha P2O5 and 90 kg/ha K2O at planting. For radish, 300 to 400 kg/ha 10-25-25 mixture is recommended.

Brazil (Minas Gerais)

General recommendations are, firstly, 30 kg/ha N, 120 kg/ha P2O5 and 90 kg/ha K2O incorporated in the soil at planting and, secondly, 40 kg/ha N broadcast in two applications 10 and 20 days after planting. If available, incorporate 20 t/ha of organic matter into the soil two weeks or more before planting.

India (North Bihar)

In a sandy loam soil with pH 8.5 broadcast at planting 15 t/ha organic manure, 50 kg/ha N, 40 kg/ha P2O5, and 80 kg/ha K2O. If B deficiency occurs apply 10 kg/ha borax with the initial fertilizer package.

Further reading

MAURYA, K.R.; SINGH, B.K.: Effect of boron on growth, yield, protein and ascorbic acid content of radish. Indian J. Hort. 42, 281-283 (1985)

SANCHEZ, C.A., LOCKHART, M.; PORTER, P.S.: Response of radish to phosphorus and potassium fertilization on histosols. HortScience 26, 30-32 (1991)